1 1<sub>4</sub>

## Rodney M. LaFollette

Throughout his career, Dr. Rodney M. LaFollette has worked on high efficiency designs of secondary batteries and fuel cells, especially bipolar designs. Funded research activities over the past three years include lithium/lithium peroxide solid state batteries, bipolar silver/zinc batteries, and several types of bipolar lead acid batteries, including an effort funded by General Motors/Department of Energy to build a bipolar lead acid battery for use in hybrid vehicles. At the present time Dr. LaFollette is leading a SBIR Phase II program dedicated toward the development of microscopic batteries for use in MEMS and other integrated circuits. Dr. LaFollette also has extensive experience with mathematical modelling of batteries, including the development of a model of spirally-wound lead acid batteries used in the Hybrid Vehicle Program at General Motors.

## **Employment**

1992 - Present President/Founder, Bipolar Technologies Corp., Provo, UT

1990 - 1992 Vice President of Engineering, Enyon Corp., Provo, UT

1987 - 1990 Senior Materials Eng., International Fuel Cells, South Windsor, CT

#### Education

Academic Diploma, International School of Brussels, Brussels Belgium, 1975

B.S., M.S., Chemical Engineering, Brigham Young University, 1984

Ph.D., Chemical Engineering, Brigham Young University, 1988

### Professional/Honor Societies

Areas of Expertise

Tau Beta Pi, Sigma Xi,

Mathematical Modeling,

Electrochemical Society, AIChE

Electrochemistry, Colloid Chemistry,

Digital Process Control, Combustion

#### Publications and Patents

LaFollette, R., Hedman, P., Smith, P., "Analysis of Two-Color Coal Particle Temperature Measurements," Combustion Science and Technology, 66, p. 93 (1989).

Ashley, K., Parry, D., Harris, J., Pons, S., Bennion, D., LaFollette, R., Jones, J., King, J., "Properties of Electrochemically Generated Poly(p-Phenylene), *Electrochimica Acta*, 34, No. 5, 599 (1989).

LaFollette, R., Bennion, D., "Design Fundamentals of High Power Density, Pulsed Discharge, Lead Acid Batteries I. Experimental," J. Electrochem. Soc., 137, No. 12, 3693 (1990).

LaFollette, R., Bennion, D., "Design Fundamentals of High Power Density, Pulsed Discharge, Lead Acid Batteries II. Modeling," J. Electrochem. Soc., 137, No. 12, 3701 (1990).

LaFollette, R., "Design and Performance of High Specific Power, Pulsed Discharge, Bipolar Lead Acid Batteries," Proceedings of the Tenth Annual Battery Conference on Applications and Advances, Long Beach, CA, p. 43, January (1995).

- Stewart, L., Bennion, D., LaFollette, R., "Mathematical Model of the Anodic Oxidation of Lead," J. Electrochem. Soc., 141, No. 9, p. 2416 (1994).
- Ryan, D., LaFollette, R.M., Salmon, L., "Microscopic Batteries for Micro ElectroMechanical Systems (MEMS)," *Proceedings of 32<sup>rd</sup> IECEC*, 97-8, 97136, Honolulu, HI, August (1997).
- LaFollette, R.M., Salmon, L.G., Barksdale, R.A., Beachem, B., Harb, J.N., Holladay, J.D., Humble, P.H., Ryan, D.M., "The Performance of Microscopic Batteries Developed for MEMS Applications," *Proceedings of 33<sup>rd</sup> IECEC*, 98-8, Colorado Springs, CO, August (1998).
- Salmon, L.G., Barksdale, R.A., Beachem, B.R., Harb, J.N., Holladay, J.D., Humble, P.H., LaFollette, R.M., Ryan, D.M., "Fabrication of Rechargeable Microbatteries for Microelectromechanical Systems (MEMS) Applications," *Proceedings of 33rd IECEC*, 98-8, Colorado Springs, CO, August (1998).
- Harb, J., LaFollette, R.M., "Predictions of Thermal Behavior of a Spirally-wound Lead-Acid Battery," Proceedings of 33rd IECEC, 98-8, Colorado Springs, CO, August (1998).
- Harb, J., LaFollette, R.M., "Mathematical Model of the Discharge Behavior of a Spirally Wound Lead-Acid Cell," J. Electrochem. Soc., 146, No. 3, p. 809 (1999).
- Ryan, D., LaFollette, R.M., Harb, J.N., "Power Supply Concepts for Remote, Autonomous Sensors," SAE Proceedings 1999, Phoenix, AZ, April (1999).
- Harb, J.N., Holladay, J., Humble, P., Barksdale, R., Salmon, L., Ryan, D., LaFollette, R., \* Electrochemical Behavior of Microscopic Secondary Batteries, \* Proceedings of 34th IECEC, 99-8, Vancouver, BC, August (1999).

Five Patents Issued, Several Others Submitted and in Review.

# CERTIFICATE OF MAILING

I hereby certify that the foregoing DECLARATION OF RODNEY M. LAFOLLETTE, Ph.D. is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on 7 March 2000.

Lynn & Foster

Attorney for Applicants